again open out into the aorta **6** such as at **11**. The dotted line **12** shows the normal position of the wall of the aorta.

Treatment of the aortic dissection requires that the rupture **7** be closed off and the false lumen deflated.

As can be seen in FIG. **2** a deployment device **15** with a nose cone **16** has been advanced over a guide wire **17** through the true lumen **18** of the descending aorta **6**. Preferably the deployment device is inserted through a femoral artery and up through the iliac arteries into the aorta.

Once the deployment device is in substantially the correct place angiographic fluids may be supplied through a hollow elongate catheter **20** in the deployment device to exit through apertures **22** in the nose cone so that with the angiographic contrast medium the region can be visualised by radiographic techniques.

When the deployment device is found to be in the correct position the sheath **24** of the deployment device is withdrawn to the position as shown in FIG. **3** at which stage the covered portion **25** of the prosthesis is exposed except that the proximal end **27** is retained by a trigger wire mechanism to the central catheter **20**. The sheath is withdrawn until the first of the uncovered stents **29** of the prosthesis are exposed. At this stage the pressure of blood flow from the heart will still tend to cause blood flow around the prosthesis.

Next the trigger wire mechanism is released so that the proximal end **27** of the prosthesis **25** is allowed to open as shown in FIG. **4** and the barbs **30** on the proximal end of **27** of the prosthesis engage against the wall of the aorta to securely fix the covered portion **25** of the prosthesis in the upper end of the descending aorta with the covered portion **25** of the prosthesis covering the rupture **7** and essentially closing it off so that blood can no longer flow into the false lumen **10**. Blood can then flow through the covered portion of the prosthesis and exit out the end of the covered portion at the first stent **29** and then as the sheath **23** is continued to be withdrawn the remaining self expanding stents are allowed to engage against the wall of the true lumen **18** and provide pressure onto the wall particularly where the false lumen occurs to gradually deflate and close off the false lumen as finally shown in FIG. **4**. At this stage the sheath **23** is advanced to the nose cone **16** and the deployment device is withdrawn.

FIG. **5** shows a prosthesis for use with the method of the present invention. The prosthesis has three stents **35** under a biocompatible graft material cover **36** which provides the covered portion **25** of the prosthesis and a number of uncovered stents **38** each of which are linked to the next stent up or down by flexible links **37**. The covered portion is joined to the uncovered portion by links. The flexible links enable each stent to expand separately as the false lumen is deflated which may occur over a period of several days or weeks. The stents provide gradual pressure on the wall of the lumen to close the false lumen and open up the true lumen.

It will be realised that different numbers of covered stents and uncovered stents may be used depending upon the nature of the aortic dissection and the length of aorta to be opened and the dimensions of the rupture in the wall of the aorta.

Barbs **30** are provided at the proximal end **39** of the prosthesis.

The stents **35** may be Gianturco zigzag Z stents or any other form of self expanding stent. Alternatively the stents **35** may be balloon expanded stents.

The prosthesis may have a total length of from 100 to 300 mm and a diameter when expanded of 22 to 45 mm. The covered portion may have a length of from 50 to 150 mm and a diameter when expanded of 22 to 45 mm.

As discussed earlier the stents **38** and the links **37** may be in the form of a mesh and formed from a biocompatible and biodegradable mesh material so that after it has performed its work of providing a radial pressure onto the wall of the aorta it can biodegrade in the bloodstream.

FIG. **6** shows a further embodiment of a prosthesis according to the present invention.

In this embodiment the covered portion is the same as in the previous embodiment shown in FIG. **5** but the uncovered self expanding stents **40** are linked by means of a fibre or thread **42** such as a suture so that each self expanding stent can act independently of its neighbours. Where each fibre or suture **42** passes a bend **41** of a stent there may be a knot **43** such as a clove hitch to assist with the controlled linking of adjacent stents. Threads or sutures **44** join the proximal uncovered stents **40** to the covered portion **25** of the prosthesis.

FIG. **7** shows a still further embodiment of the prosthesis of the invention.

In this embodiment the covered portion is the same as in the previous embodiment shown in FIG. **5** but the uncovered portion is formed from a continuous spiral of zig-zag stent **45** with again loops in adjacent spirals joined by a thread **47** such as a suture. Again suitable knots may be used to assist with the controlled linking of adjacent portions of the spiral stent. Threads or sutures **49** join the uncovered spiral stent **45** with the covered portion **25** of the prosthesis.

Throughout this specification various indications have been given as to the scope of the invention but the invention is not limited to any one of these but may reside in two or more of these combined together. The examples are given for illustration only and not for limitation.

What is claimed is:

1. An aortic dissection treatment prosthesis comprising; a proximal covered portion and a distal uncovered portion, the distal uncovered portion being fastened to and extending distally from the proximal covered portion;

the proximal covered portion comprising a tubular body of a biocompatible graft material and at least three self expanding stents within the tubular body and supporting the tubular body to provide an outside sealing surface;

the distal uncovered portion comprising a plurality of self expanding stents linked together by flexible links and defining an elongate substantially cylindrical and flexible lumen wall engaging surface, the flexible links comprising a thread or fiber connected between adjacent stents in the uncovered stent assembly, wherein the stents of the uncovered stent assembly comprise bends and the stents of the uncovered stent assembly are linked to adjacent stents by the thread or fiber between adjacent bends of the stents and wherein there are from eight to ten uncovered stents of the plurality of stents in the uncovered stent assembly each of the stents being of a zig-zag type and being formed from stainless steel or nitinol;

the proximal covered portion providing a cover for an aortic dissection to close off the dissection so that blood can no longer flow therethrough and the distal uncovered portion providing gradual pressure to close a false lumen of the aortic dissection and open up a true lumen with the flexible links between adjacent bends of the stents enabling each stent to expand separately as the false lumen is closed off.

2. A prosthesis as in claim **1** wherein the thread or fiber is connected to each bend by a knot selected from a half hitch, a thumb knot, two half hitches or a clove hitch.

3. A prosthesis as in claim **1** wherein a proximal end of the covered portion of the prosthesis includes barbs extending from a stent of the plurality of stents through the cover to engage with the wall of the lumen when deployed.